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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,451	05/21/2002	Igor Vladimir Khudyakov	A7728	5676

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EXAMINER

MARKHAM, WESLEY D

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,451

Applicant(s)

KHUDYAKOV ET AL.

Examiner

Wesley D Markham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/7/2005 (the RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application on 1/7/2005 after final rejection.

Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office Action (mailed on 7/9/2004) has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/7/2005 has been entered.

Response to Amendment

2. Acknowledgement is made of the amendment filed by the applicant on 1/7/2005, in which Claims 1 and 12 were amended, and Claims 21 – 23 were added. **Claims 1 – 23** are currently pending in U.S. Application Serial No. 10/030,451, which is a 371 (National Stage) Application of PCT/US00/11879, filed on 6/16/2000, and an Office Action on the merits follows.

Drawings

3. The replacement sheet of drawings (1 sheet showing a single figure) filed by the applicant on 4/22/2004 is acknowledged and approved by the examiner.

Claim Observations

4. Independent Claim 1 requires, in part, “a beam expander for expanding an output of the laser source”. For the purposes of examination, the examiner notes that the aforementioned “beam expander” is not the same as and does not read on a so-called “beam splitter” which simply splits an incoming laser beam into two different outgoing laser beams and does not expand the beam. If the beam splitter also expands the diameter of the laser beam (i.e., as well as splitting the beam), it would qualify as a “beam expander”, as required by the claims. The point the examiner wishes to make is that splitting a laser beam, per-se, into multiple beams, is not the same as and does not read on expanding the laser beam in the context of the instant application.
5. Regarding amended independent Claim 12, the preamble of the claim recites, “photocuring a coating on an optical fiber”, while the body of the claim recites, in part, “focusing the expanded diameter laser beam...to cure the fiber”. It is clear from the preamble of the claim, as well as the applicant’s specification (see, for example, page 1, lines 2 – 5), that the step of “focusing the expanded diameter laser beam...to cure the fiber” recited in Claim 12 refers to curing the coating on the fiber (not the fiber itself), and the claims have been interpreted accordingly.

Claim Objections

6. Claims 1, 7, and 12 are objected to because of the following informalities:

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- Claim 1: The phrase, "wherein the coating is reponsive to a wavelengtht of light emitted from the laser source" appears to contain typographical errors (i.e., the words "responsive" and "wavelength" are misspelled).
- Claim 7: The word, "said" appears to be misspelled, "siad".
- Claim 12: The word, "and" appears to be missing before the word, "reflecting" (i.e., before the last method step recited in the claim).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Fejer et al.

(USPN 4,650,322).

9. Regarding independent **Claim 1**, Fejer et al. teaches an apparatus for measuring changes in the diameter of a target fiber, the apparatus comprising a laser source "20", a beam expander "22" for expanding the output of the laser source, a first lens "24" operable to focus an output of the beam expander on the target fiber "26", and a concave optical element "28" disposed on an opposite side of the target fiber relative to the beam expander and the first lens "24" (Abstract, Figure 2B, and Col.2, lines 55

– 68). Fejer et al. does not explicitly teach that the apparatus is “for photocuring a coating on a target fiber”, as recited in the preamble of Claim 1, or that the first lens is “operable to focus an output of the beam expander on the coating disposed on the target fiber, wherein the coating is responsive to a wavelength of light emitted from the laser source”. However, since the apparatus of Fejer et al. is clearly capable of focusing laser light on a fiber in the manner claimed by the applicant (e.g., the first lens is operable to focus an output of the beam expander on the target fiber) (see Figure 2B and Col.2, lines 55 – 68), the apparatus is also capable of photocuring a coating on a target fiber when the coating is response to a wavelength of the laser light. Therefore, the apparatus of Fejer et al. anticipates the apparatus of Claim 1. In other words, at the very least, the laser beam of Fejer would be capable of slowly curing a coating on a fiber to a relatively low degree so long as the coating is sensitive to the wavelength of radiation emitted by the laser. Thus, the apparatus of Fejer is capable of “photocuring a coating on a target fiber”. To further support this argument, the examiner cites Inaishi (USPN 5,275,917), which clearly shows that a He-Ne laser of low power can be used in photocuring processes (Col.5, lines 37 – 44). Please note that claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, and a claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be used does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). In this case, Fejer teaches a laser source, a beam expander, a first lens operable to focus

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an output of the beam expander, and a concave optical element, thereby teaching all the structural limitations of Claim 1. Additionally, please note that Claim 21, which further requires that the apparatus comprise the target fiber having the wavelength-responsive coating disposed thereon, has not been rejected by Fejer because the apparatus taught by Fejer does not comprise such a coated fiber.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. **Claims 1, 9, 10, 12, 19, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN

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4,069,080) for the reasons set forth in paragraph 13 of the previous Office Action.

Please note that the aforementioned combination of Kruishoop and Osborne teaches that the coating on the target fiber is responsive to a wavelength of light emitted from the laser source, as recited in amended independent Claim 1 (Abstract, Col. 1, lines 11 – 26 of Kruishoop); the apparatus further comprises the target fiber having the coating disposed thereon, as recited in new Claim 21 (Col. 3, lines 28 – 45 of Kruishoop); and the laser beam cures the coating on the optical fiber, as recited in amended independent Claim 12 (Col. 12, lines 12 – 13, Col. 3, lines 39 – 40 of Kruishoop).

13. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of either Ortiz, Jr. (USPN 4,958,900) or Kato (USPN 4,566,762) for the reasons set forth in paragraph 15 of the previous Office Action.

14. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of Petisce(1) (USPN 5,015,068) and Yamada et al. (USPN 6,033,829) for the reasons set forth in paragraph 17 of the previous Office Action.

15. **Claims 4 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view

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of Petisce(1) (USPN 5,015,068) and Yamada et al. (USPN 6,033,829), and in further view of Tausch et al. (USPN 6,078,713) for the reasons set forth in paragraph 19 of the previous Office Action.

16. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of Petisce(1) (USPN 5,015,068) and Yamada et al. (USPN 6,033,829), and in further view of Akerman et al. (EP 0 202 803 A2) for the reasons set forth in paragraph 21 of the previous Office Action.

17. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of Petisce(2) (USPN 5,000,772) for the reasons set forth in paragraph 23 of the previous Office Action.

18. Claims 7, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of Akerman et al. (EP 0 202 803 A2) for the reasons set forth in paragraph 25 of the previous Office Action.

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of

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Petisce(2) (USPN 5,000,772), and in further view of Tausch et al. (USPN 6,078,713) and Field et al. (USPN 6,195,486 B1) for the reasons set forth in paragraph 27 of the previous Office Action.

20. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of Field et al. (USPN 6,195,486 B1) for the reasons set forth in paragraph 29 of the previous Office Action.

21. **Claims 17 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruishoop (USPN 4,849,640) in view of Osborne (USPN 4,069,080), in further view of Petisce(1) (USPN 5,015,068), Yamada et al. (USPN 6,033,829), and Field et al. (USPN 6,195,486 B1) for the reasons set forth in paragraph 31 of the previous Office Action.

Allowable Subject Matter

22. Claims 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

23. The following is a statement of reasons for the indication of allowable subject matter:

New Claims 22 and 23 require that the concave optical element comprise a half cylinder mirror (apparatus), or the step of reflecting the laser beam to the rear side of

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the fiber includes reflecting the beam with a half cylinder mirror (method). The use of such a half cylinder mirror in the context of the apparatus and method claimed by the applicant is not taught or reasonably suggested by the prior art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D Markham whose telephone number is (571) 272-1422. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WDM

Wesley D Markham
Examiner
Art Unit 1762



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